

Fish Use of Stream Drainage Basins in the City of Bellevue

April 2009

Background and Data Sources

Current knowledge of the species of fish in Bellevue's streams and their distribution is based on stream typing work conducted in the summer of 2001 (The Watershed Company 2001) that involved assessing culverts as to whether fish could pass upstream and electrofishing; an electrofishing survey conducted at five sites in the Kelsey Creek basin in 2007 (City of Bellevue, unpublished data) and fish moved prior to sediment removal from two sediment ponds along Coal Creek (The Watershed Company 2007a); salmon spawning surveys conducted annually during the fall between 2001 and 2008 (Taylor Associates 2002; The Watershed Company 2003, 2004, 2005, 2006, 2007b, 2009); and peamouth surveys and spawning observations conducted by Bellevue staff and volunteers between the late 1990s and 2008 (City of Bellevue, unpublished data). Lake Washington shore use by warm water fish was documented by Washington Department of Fish and Wildlife in June of 2005 (Personal Communication, Chad Jackson, July 18, 2007). Fish use of the lake shore along Lake Sammamish has not been documented by the City of Bellevue.

Mercer Slough Basin

Prior to 1916 when the Montlake cut was completed, the elevation of Lake Washington was at least nine feet higher than present; it may have risen an additional three to four feet higher in winter. Mercer Slough was navigable by shallow draft steamboats and ferries for much of the year up to where I-405 now crosses. The wetland area associated with Mercer Slough extended well south of the mouth of Coal Creek, and north in Bellevue as far as present Main Street (McDonald 1984). King County constructed a dock in the 1890s, at the north end of the slough. A logging camp and a sawmill were established there. Log rafts were assembled in the slough for towing across Lake Washington and lumber shipments were made until the area became isolated by the lowered lake level (Harvey 1992; McConaghy Undated; McDonald 1984).

Currently, Mercer Slough serves mainly as a migration corridor for adult fish heading upstream to spawn in Kelsey Creek and its tributaries and for juvenile fish migrating downstream (Williams et al. 1975). In season, migrating chinook, coho, and sockeye salmon pass through the slough, as do migratory cutthroat trout and steelhead. The fish ladder below the I-405 culvert was rebuilt in 2003 to improve fish passage, and since then, Peamouth have also used the slough to gain access to Kelsey Creek. The slough provides rearing habitat especially for juvenile coho and Peamouth, and juveniles of other species. Lake fish are commonly observed in the slough by Bellevue staff, including three-spined stickleback. There is no suitable salmon spawning habitat in Mercer Slough, and there was likely none historically.

See Bellevue's Basin Fact Sheet main web page for additional fish use information for Bellevue streams.

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